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Notes on Covillea and Fagonia

BY ANNA MURRAY VAIL

Dr. B. L. Robinson (Syn. Fl. 1: 356) has pointed out that the leaflets of *Larrea divaricata* Cav. are more narrowly oblong, more widely spreading and are less inclined to be falcate as well as more decidedly connate than are those of *Larrea Mexicana*. Mr. F. V. Coville recently (in litt.) also claims that however closely related, the southwestern species is distinct from the Chilian species. The plant on which I based my examination of *Larrea divaricata* was a duplicate of the "Macrae" specimen mentioned by Dr. Robinson and it is undoubtedly *L. Mexicana*. Since then I have seen the following specimens from South America (Herbarium of the British Museum) purporting to be *Larrea divaricata*: Lorenz, no. 105; Cordoba, G. Hieronymus, "5, 6, 1877"; South Am., Pearce; Chili, Bridges, 1843, and a specimen from Patagonia which is identical with one from Rio Negro, North Patagonia, from the Wilkes expedition in the Herbarium of Columbia University. They all agree with the differences referred to by Dr. Robinson and in addition I will add that they do not appear to be quite so resinous as the North American plant and the fine silky pubescence of the young leaves seems to be more abundant and to persist longer; the venation is also more distinct. There are some North American specimens, however, which approach very closely to *L. divaricata* and among them I noted one collected at "El Paso, New Mexico," by H. Carruthers, Nov. 10, 1884, in the Herbarium of the British Museum and a specimen without flowers or fruit collected by Frémont on his expedition to California in 1849 (Herb. Torrey).

The synonymy of these two species should therefore stand as follows:

COVILLEA DIVARICATA (Cav.) Vail, Bull. Torr. Bot. Club, 22: 229. 1895

Larrea divaricata Cav. Ann. Hist. Nat. 2: 122. 1800. Cav. Ic. 6: 40. pl. 560, f. 1. 1801.

Covillea tridentata (DC.)

Zygophyllum tridentatum Moç. & Sessé; DC. Prodr. 1 : 706.
1824; A. DC. Calques des Dess. *pl.* 159.

Larrea Mexicana Moric. Pl. Nouv. Am. 71. *pl.* 48. 1833-46.

Larrea glutinosa Engelm. Wisliz. Rep. 9. 1848.

Zygophyllum Californicum Torr. & Frém.; Frém. Rep. 257.
1845.

FAGONIA CALIFORNICA Benth. Bot. Sulp. 10. 1844.

A type specimen of *F. Californica* var. *Barclayana* Benth.* in the Herbarium of the British Museum is puberulous as described, but does not show the very marked and conspicuous gold-colored glands of *Fagonia Californica* var. *glutinosa* Vail (Bull. Torr. Bot. Club, 22 : 229). The species is very variable and it is doubtful whether any of the forms described deserve varietal rank.

COLUMBIA UNIVERSITY, May 19, 1899.

* Syn. Fl. 1 : 355.